

Supplemental Digital Content 3: Level 1 and Level 2 screening criteria

Level 1 (Article may be excluded if it is)	
1	<ul style="list-style-type: none">• A review article, letter, editorial• A systematic review• Surveys• Interventional study• Study population is animal or cell line• Study population has a specific genetic based disease• Study describes less than 10 patients• There is no mention of vitamin D levels, vitamin D status or vitamin D deficiency in the abstract (exclude those that only mention vitamin D binding protein or vitamin D receptors)• No mention of critical illness, intensive care, mortality/death, mechanical ventilation, cardiovascular support (vasopressors, inotrope score, ECMO, etc) in the abstract
Level 2 (article should be excluded if)	
2	<ul style="list-style-type: none">• Does not include children (≤ 18 years)• Includes children over 21 years but does not report data separately for children
3	<ul style="list-style-type: none">• No patients admitted to PICU
4	Does not report on vitamin D status using 25OHD level Vitamin D levels were measured prior to death (e.g. does not represent a SIDS or related syndrome where patients were dead)
5	<ul style="list-style-type: none">• Does not report on one or more of the following ICU outcomes<ul style="list-style-type: none">○ Mortality (PICU or hospital)○ Mechanical ventilation (e.g. intubation, duration of MV)○ Vasoactive agent use (e.g. inotrope score, catecholamines, vasopressors)○ PICU Illness severity score (e.g. PRISM, PELOD, PIM)
6	<ul style="list-style-type: none">• Study type other than observational cohort or case control study
7	<ul style="list-style-type: none">• Meets above, but enrolled a specific disease process or surgical procedure (ALRI, Cardiac surgery, prematurity)

PICU – pediatric intensive care unit; ECMO – Extracorporeal membrane oxygenation; SIDS – sudden infant death syndrome; ICU – intensive care unit; MV – mechanical ventilation; PRISM – Pediatric Risk of Mortality; PELOD - Pediatric Logistic Organ Dysfunction; PIM –Pediatric Risk of Mortality; ALRI – Acute lower respiratory infection